

Serial No. 10/780,725

Attorney Docket No. 11-225

LISTING OF CLAIMS:

1. (Withdrawn) A circuit configured to activate an actuator comprising:
 - a sensor sensing a predetermined physical event to provide a signal indicative of the event;
 - a controller responsive to the signal inputted from the sensor to output actuator activating signals;
 - a plurality of switch drivers responsive to the actuator activating signals outputted from the controller to produce switch on-signals, respectively;
 - a plurality of independent channels each of which connects the controller to one of the switch drivers to transmit the actuator activating signals from the controller to the switch drivers, respectively; and
 - a plurality of switches designed to be turned on in response to the switch on-signals produced by the switch drivers, respectively, the switches being so connected in series with each other that when the switches are all turned on, an actuator turning on-signal being provided to activate the actuator.

2. (Withdrawn) A circuit as claimed in claim 1, wherein the actuator is a squib for inflating an airbag mounted on a vehicle.

Claims 3-4 (Canceled)

5. (Currently amended) A noise-resistant circuit for squibbing a squib mounted on an object to be moved,
said circuit comprising: as claimed in claim 3

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a sensor sensing a physical quantity applied to the circuit to generate a signal corresponding to the applied physical quantity;

a controller configured to issue a command for squibbing the squib based on the signal;

a plurality of independent channels connecting the controller and a plurality of drivers to transmit the command from the controller to the plurality of drivers, wherein the plurality of independent channels comprise comprising a first channel and a second channel, the first channel being connected to a higher voltage side of an electric power line of the squib and the second channel being connected to a lower voltage side of the electric power line of the squib; and

a plurality of switching elements, mutually connected in series and driven by the plurality of drivers respectively, to squib the squib.

6. (Original) A noise-resistant circuit as claimed in claim 5, wherein, at least one of the first channel and the second channel is in charge of transmitting the command for driving two or more switching elements among the plurality of switching elements.

Claims 7-9 (Canceled)

10. (Currently amended) An airbag apparatus as claimed in claim 8 for safety comprising:

an airbag inflating in response to a signal;

a sensor sensing a movement and generating the signal in response to the movement;

a controller configured to issue a command for squibbing the squib based on the signal;

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a plurality of drivers operating in response to the command;
a plurality of independent channels connecting the controller and a plurality of drivers to
transmit the command from the controller to the plurality of drivers, wherein the plurality of the
independent channels comprise-comprising a first channel and a second channel, the first
channels being connected to a higher voltage side of an electric power line of the squib and the
second channel being connected to a lower voltage side of the electric power line of the squib;
and

a plurality of switching elements, mutually connected in series and driven by the plurality
of drivers respectively, to squib the squib.

11. (Original) An airbag apparatus for safety as claimed in claim 10, wherein at least one of the first channel and the second channel is in charge of transmitting the command for driving two or more switching elements among the plurality of switching elements.

Claims 12 -13 (Canceled)

14. (New) An airbag apparatus for safety as claimed in claim 10, wherein the apparatus comprises a plurality of squibs, the first channels being connected to a higher voltage side of electric power lines of the plurality of squibs, the second channels being connected to a lower voltage side of electric power lines of the plurality of squibs.